

[54] **ELECTRICAL CONNECTOR  
INCORPORATING EMI FILTER**

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439/620

[58] Field of Search ..... 361/111, 58, 113;  
333/181, 182; 439/620

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[57] **ABSTRACT**

An electrical connector receptacle for allowing connec-

tion of electronic apparatus contained within a shielded enclosure to a multi-conductor wiring harness using a plug having a plurality of male pins arranged in a grid pattern is shown in which the connector receptacle includes a conductive connector receptacle shell defining a housing cavity having open front and rear faces dimensioned to receive the plug when inserted through the open front face. A multi-coplanar capacitor (MCC) layered structure having a front and a rear surface is connected with its front surface facing the rear surface of the connector receptacle and having a plurality of socket contacts arranged to receive the connector pins of the male plug. Separate individual pin planes define the MCC system each associated with a pair of ground planes connected to a common chassis ground. At least one RFI filter core means is disposed in front of or behind in juxtaposed relation to the MCC and having openings allowing passage of the connector terminal pins to aid in the suppression of VHF and UHF RFI. The combined structure provides a grounded RFI filter barrier, the RFI output filtering being improved with the core means located behind the MCC and the input filtering being improved with the core means disposed in front of the PWB.

8 Claims, 4 Drawing Sheets

